

UNIT 12: Future Trends & Innovations in EV

VOCABULARY



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Term	Description	Image
Vehicle-to-Grid Technology (V2G)	A system enabling electric vehicles to not only draw power from the grid but also return excess energy back to it, enhancing grid stability and efficiency.	
Solid-State Batteries	Batteries employing solid electrolytes instead of liquid or gel ones, offering higher energy density, longer lifespan, and improved safety compared to traditional lithium-ion batteries.	
Ceramic Electrolytes	Solid materials with high ionic conductivity used in batteries, offering potential advantages such as stability at high temperatures and resistance to dendrite formation.	X
Polymer Electrolytes	Electrolytes composed of polymers, facilitating ion transport in batteries while providing flexibility, lightweight design, and potential for improved safety compared to liquid electrolytes.	X

Vehicle-to-Everything Communication (V2X)

Technology enabling vehicles to communicate not only with each other (V2V) but also with infrastructure (V2I) and other devices (V2D), facilitating safer and more efficient transportation systems.

